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T R A C T S
O N
M E D I C A L S U B J E C T S .

[Price Eighteen-pence.]



T R C T S

C. H.

MEDICAL SUBJECTS

[Illegible text]

T R A C T S
O N
MEDICAL SUBJECTS.

B Y
CHARLES ESTE,
MEMBER of the COMPANY of APOTHECARIES,
in LONDON.

Τί τιβo;—τί γὰρ ἄλλο, ἢ κακᾶς οψείας δικας δίδωμι.

PLUTARCH.

Vix a me obtineo, ut hoc Vehiculum velim videri meum;—erubesco:
Qui fordido Vehiculo erubescit, pretioso gloriatur.

SENECA.

L O N D O N:

Printed for T. DAVIES, in Ruffel-Street, Covent-Garden,
M,DCC,LXXVI.



Early in the ensuing Winter, Mr. CHARLES ESTE proposes
to read Lectures on the *Materia Medica*.

E R R A T A.

Page 18, Line 5. The Words, "As these Symptoms," relate to Pain and Inflammation, and should have been expressed by the 47th Aphorism of *Hippocrates*, Sect. 2, which in the Press happened to be OMITTED.

E. H. A. T. A.



Page 18, line 2. The words "the whole symptoms" relate
to pain and inflammation. The words "the whole symptoms" have been supplied by the
Editor. The words "the whole symptoms" are in the text of the
book to be OMITTED.



ADVERTISEMENT.

THE few following Pages are intended as a mere Testimonial, that I can write a legible Label, and that, if a Patient can suppose his Disease curable by a *Spell*, he may be apprised of a Shop that participates of that Remedy.— Added to these Effects, I wish them to appear as *Part the First* of an Appendage to my *Pestle and Mortar*, exhibiting something like an Acquaintance with the *Use and Appropriation* of Medicines, as well as their Composition and

B

Sale ;

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Sale ;—that it may be, in prescribing for my Patients a Credential that I know *how* ;—a kind of Passport to their Confidence.—This, in my Apprehension, is the Duty of every Apothecary ; nor is it less a Duty to be brief in saying so ; exposed in a *Necessity* to say something, let me be as laconic as that *Necessity* will suffer ; I ought not, I hope not, to be guilty of one redundant Iota ; indeed, however I may be circumstanced in other Respects, I have tried to escape that Imputation, which *Justice* or *Slander* has attached to Apothecaries, *viz.* the Imputation of *Loquacity*.

Professionally speaking, it is an *Error Loci* † when the Productions of an Apothecary go to the *Press* ; yet, *cogor fatis*, mine are thrust into it by my Condition, and by the Im-

† *Error Loci* — dicitur hoc Vitium obtinere quando Humor ingressus fuerit Vasa *minora*, in quibus *naturaliter* non esse debet.

VANSWIETEN in BOERHAAV.

ADVERTISEMENT. vii

pulses of my Duty ; my *Cacoethes* is *sui Generis*, neither hereditary nor acquired, but *imposed* on me by my *Profession*, as certainly, as on the *Chimney Sweeper* his Cancer, or the *Painter* his Disease, or on the Professor of any other Exercitation his technical and peculiar Complaint.—

However, since I must write a *Recipe* for the Press, let it be in the *Chymical* Method, and contain the Virtue of a full Draught in a few Drops. The *Galenical* Method would be, to write by the *Rood* ;—to write by the Rood, would be to prescribe a Medicine† with *Temerity* and in *large* Quantities, which in the smallest Dose, and with the greatest Care, can scarcely be ventured on with Safety.—

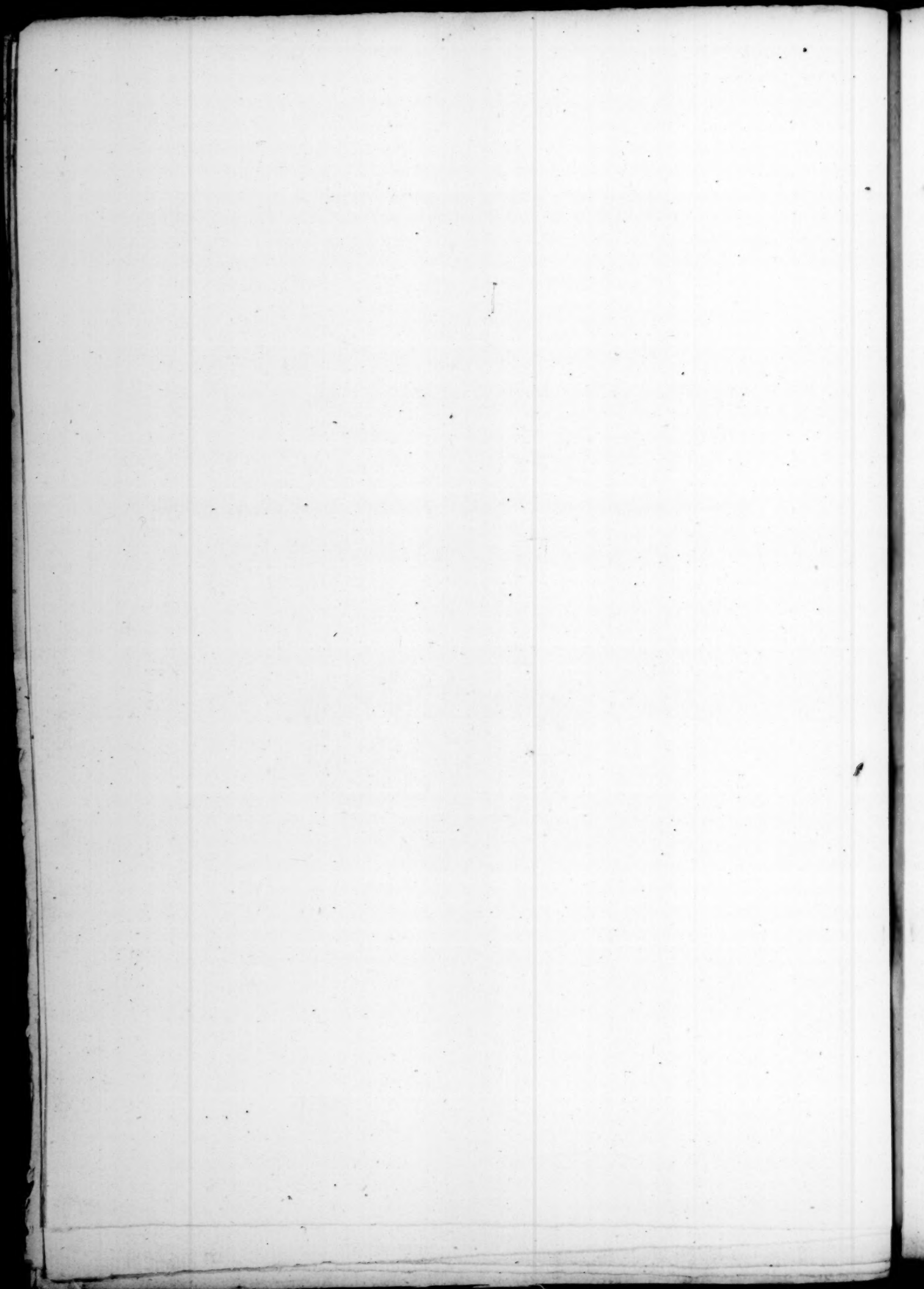
On *this Principle*, I leave the two following Pages blank ; for I could have filled them.—Some Communication of

† See every Writer of Intelligence on the medical Administration of Lead.

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the System, which incorporates the Company of Apothecaries, which subjects each Individual of it to periodical Examinations of his Shop, and to penal Impositions on the Discovery of any Medicines sophisticated or decayed ;---This Matter properly diluted had made the Pages *run over* ; nor, perhaps, would it have been an impertinent Assertion of that *better* Credit and *exclusive* Preference due to those Apothecaries who are *Members* of the *Company*.---





*The Blank Leaf ensures to that Part of the Publication
a Kind of negative Praise, an Exemption from Error;—
An Entreaty to those Imaginations which can infuse into it
any Quantity of positive Desert, and to those kind Spirits,
which, sharing with Nature her Abhorrence of a Vacuum, will
rush into it, and fill it with Plenteousness.*

The Blank Leaf refers to that Part of the Publication
a Kind of negative Page, an Impression from Error;—
An Entrance to those Imaginations which can infuse into
any Quantity of positive Data, and to those kind of
which bearing with Nature her Absence of a Vacuum, will
ride into it, and fill it with Fictions.



T R A C T S
O N
M E D I C A L S U B J E C T S.

On Evacuation in Inflammatory Tumors.

THE medical Reader can easily imagine the Existence of an Inflammation, without leading him through the Causes that may have occasioned it ; he will readily recur to the contracted Diameter of the Vessels, or the inspissated Elements of their Contents ; the Pressure on the Vessels, the Density of the Coats, the Cohesion in the Particles will all come before him ; he can presuppose the Influence of any or of all these Circumstances, and will be absorbed in his Attention to counteract their Effects.

Corporeal Inactivity and Tranquility of Mind, no Animal Food, the *Pythagorean* Diet, perfectly vegetable, the *υγραι διαίται* well acidulated, and drank plentifully, constitute the domestic Regimen ; in the medical, before diluting Nitrous Medicines and Neutral-Febrifuges, Evacuation takes the lead.—

Evacuation comprises the Idea of Phlebotomy and purging ; common Practice approximates the first, and derives a Sanction from the
C Authority

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Authority of Galen ;* *Ubi ferrescentis Sanguinis inest Plenitudo, acutissimam accendens Febrim, subito ac simul evacuare expedit, eamque inanire tentandum, vel ad Animi Deliquium usque, Virium modo inspecto Robore*; and from the Consent of all Observation it is known, that to derive any possible, or at least, any material Advantage from the Bleeding, it is the *sine qua non* of it, that the Evacuation be both large and sudden ; for if only a *small* Quantity of Blood be taken away, the general Mass will not be sufficiently lessened ; and if it be not done *suddenly* the Force of the Heart, pressing upon the Blood behind, will not be weakened to the Degree required.

Now when it is considered, that the Fever and Plenitude may be both symptomatic, merely the Consequence, not the Cause of the Disorder, and may prevail without any previous idiopathic Disposition to them, does it not occur, that so *sudden* and *copious Evacuation* as to induce *Inanition* and *Deliquium*, should be, and is, very limited in its Practice ? That in the most athletic Habits only, it can be free from Hazard ; in Constitutions not so robust it must be attended with some, if not a great Degree of Danger, and that in weaker Temperaments the Probability of the Event must border on Fatality ? And though in Inflammations of the Meninges of the Brain, of the *Pleura*, of the *Peritoneum* and other *violent* membranous Affections, on the Authority of *Hippocrates*† and Experience, such *violent* Remedies may be proper, yet in less urgent Cases they must be entirely the reverse, and not vindicable on any Principle of Humanity or Intelligence. And to venture my Idea, I should say, that the “ *Virium inspecto Robore* “ amounts to a Proscription of the free and indiscriminate Use of the Lancet ; and that *one* brisk *Cathartic*, with *less* Danger to the Patient, and more *effectually* relieves inflammatory Tumors than *repeated Bleedings*.

* De Curanda Ratione per Venæ Sectionem. Tom. x. Cap. 12.

† Εξ δὲ τῶν σχολῶν νοσήσας, αἱ σχολῆς θεραπεύειν οὐκ ἀνέστιν, κρείσσας. Aphorism. 6.

On Resolvent Applications.

THE local Assistances derived from Art to the Relief of inflammatory Tumors, are reducible to the general Idea of *Resolvents*; another Set of Medicines have been added under the Notion of *Repellents*; a Distinction that seems to consist in *Term* alone, without any Difference in *Effect*; for as it is impossible to move either backwards or forwards a tenacious and obstructed Mass, while it still remains a Mass entire and unattenuated, so, when the Concretion is dissolved, and its Parts reduced to their Fluidity, no *repellent* Assistance will be wanting to restore the Circulation, but that derivable from the Action of the Vessels.

To attenuate the Humors, to relax and moderately stimulate the Coats of the Vessels, constitute the Wish of external Endeavor. Water strongly impregnated with *Sal Ammoniac* is, perhaps, the best of all Resolvents, fulfilling every Indication with the greatest Power and most possible Certainty, if applied with its proper Degree of Heat; this should neither exceed, nor abate of, the healthy animal Standard.

Ultra citraque nequit consistere Rectum.

If it is too *cold*, it will instead of relaxing, constrict the Vessels; if it is too *hot*, it not only ceases to attenuate, but disposes the Fluids to unavoidable Concretion, and, perhaps, irresolvably endangers those already cohered.

Be the resolvent Application what it may, it is most commodiously exhibited in the Form of Fomentation, Vapour, or Cataplasm: Ointments and Plasters are unquestionably wrong: Common Practice will,
I know,

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I know, countenance their Use, but can by no Means justify it; since in these Forms the Properties of the Application are introduced with less Expedition, the unctuous Particles fatiating the cutaneous Pores, the Absorption is retarded, and when effected, may probably be useless, having its Activity suffocated, or at least clogged, with an heterogeneous Vehicle, incapable of Assimilation with the Fluids.



Suppuration.

Suppuration.

WHEN the Means just described are either from Neglect, or Insufficiency unsuccessful, and the Obstruction cannot be resolved, Nature discharges herself of it, the vital Power removes it from the sound permeable Part of the Vessels; from the Effusion of their Contents, and the Dissolution of the detached Obstruction, what is called *Pus*, is created.

To assist this Indication of Nature, Attention both to the Part affected and the general Health, is required of *Art*. If the *Vis Vita* is excessively powerful, the Patient will want Evacuation and Reduction; if in the vital Principle a contrary Tendency prevails, necessary will be Refection and Support. Any of the milder Aperients, a restrained fluid* Diet and neutral Febrifuges, will discharge the *first* Intention; a greater Latitude in a well-ordered Living, a light easy digestible and nourishing Diet, with the Bark, will as sufficiently coincide with the *second*.

If the Circulation is very languid, and the imposthumating Disposition very backward and inert, I should conjecture, that *small Bleedings* would encrease the arterial Vibrations; would accelerate the Circulation, and raising the Fluids to the digestible Standard, would promote the

* Aphorism. 16. Hippocrates.

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Suppuration of a Tumor. If this Idea is admissable, it gives Birth to another; and on the same Principle *topical* Bleeding must be rational, that is, at least the Opening of a Vessel adjoining to the Tumor, must operate with more Energy and Expedition.

As these Symptoms require mere Warmth and Relaxation, a soft Poultice of white Bread and Milk will be the best Application. When the Pain and Tension are abated, the Application may be changed to something of more Activity: Among the Remedies of this Character, perhaps the Pulp of dried Figs will be ever found the most effectual. The Truth of this Position derives sufficient Sanction from its Origination: When the Prayer of Hezekiah,* (who was sick unto Death) was heard by the Lord, and He had seen his Tears and consented to heal him, Isaiah said (may we not suppose by the Lord's Order or Inspiration?) *Take a Lump of Figs;—and they took and laid it on the Boil, and he recovered: Cælum quid quæremus ultra?* The Boil of Hezekiah being an Abscess†, the critical Metastasis of a Fever, to hasten the Suppuration of the Tumor was to hasten the Termination of the Disease, and of Course, the Recovery from it.

* Second Book of Kings, Chap. xx.

† Doctor Mead.

Maturation,

Maturation, and Thoughts on the Mode of opening the Tumor per se.

WHEN, by the Combinations of Nature and Art, the Matter is perfectly matured, it is discovered by a Remission of all the preceding Symptoms; the Patient feels the Hardness, the Resistance, the *odum* *avertusum* with little Severity, or totally abated; the red Colour of the Part changes to a *white* or *livid* Appearance. Celsus says, *Melius est, et quod quamvis rubet, Coloris tamen in album mutati est*; in Opposition to the *Sublividum*, observed by him in the succeeding Part of the same Chapter.

The Preference thus given to one Appearance implies an Inferiority in the other; a Distinction in *Effect*, which really does not exist. Both the Changes of Surface proceed from the Pressure of subjacent *Pus*, modified in Appearance, probably from different Degrees of Density in the Skin; in the *thinner* Integuments the Cuticle and the Vessels are *extenuated*; in the *thicker*, as the same Extenuation cannot take Place, the Vessels are only compressed, the Circulation is impeded, the Skin becomes *livid*, becomes *gangrenous*.

If besides this Circumstance, the Tumor is uniformly soft, and the Fluctuation sensible to the Fingers of an Examiner, there cannot be a Doubt of the Maturation being obtained; it will remain to consider the *Mode* of its *Evacuation*.

The Propriety of leaving the Tumor to break spontaneously, has been much agitated; in the Idea, that when the *Pus* is completely formed, by the Law of Matter and Motion it will gravitate to the most *depending* Part, and *there* for itself open a convenient Vent, spontaneous Aperision, was, I suppose, supported; but must cease to be so, when it is considered, that these Expectations may be, by accidental Circumstances perverted; that from the mere Possibility of *Posture* alone, the Part which should be, and is naturally, the most depending, will no longer be so, and that the Opening then made, may be in the Part, of all, the most improper; that from the single Circumstance of Density of *Skin*, the whole Intention may be at once defeated, and that it may be impossible for the Matter to obtain for itself an Aperture; and that for Want of it, the *Pus* being too long confined, may descend in *Fistule* through the Cellular Membrane, or contracting an acrimonious or putrid Taint, may be received by the Absorbents, and transmitted through the Rountine of the Circulation.

A moderate Acquaintance with the Economy of animal Functions confess both the Probability of this Consequence, and its various Fatality; Examples in Proof could be brought out of Number; one may be sufficient: In the last Stage of the Small Pox, how necessary is it to promote the several Secretions, lest the Matter should be absorbed? How frequent is it for these Attempts to be baffled, and Fevers to be excited? And though Galen relates the Case of a *Thoracic* Abscess, accompanied with *Stertor* and obstructed Respiration being carried off by Stool; and from Fabricius *ab Aqua pendente*, we have another, in which the Operation of the *Paracentesis* was anticipated, the Patient discharging a copious Quantity of Blood by Urine, by which the Symptoms were relieved; and other Authors of very faithful Credit assure us of
the

the most formidable Suppurations being evacuated with the natural and excrementitious Discharges; yet the comparative Paucity of these Examples, and the Mode of their Recital, prove them to be the uncommon Operations of improbable Chance; the *Exceptions*, not the *Rules* of practical Expectation; "and it is no more proper
" to regulate our Conduct by such Instances, than to leap a Precipice, because some have fallen from it and escaped with Life."

If a possible Inability of effecting any Discharge, and a very probable Expectation of its being ill-placed, attend the *natural* Aperision of Abscesses; and, if to obviate *both* these Inconveniences; to procure a *timely* Discharge, and with Precision to ascertain the *best* Situation belong to the Artificial, its Superiority must be admitted.

The Opening *per se* may be, if necessary, opposed by another Objection; it is ever attended with a *larger Scar* than the Cicatrix of an Opening made by Incision; an Objection, in Parts where a Scar would be a Deformity, of no small Force.

For and against this Position there are two Opinions, each from great Authority: I will quote them both. The one is, *Satis est Cataplasmatibus efficere, ut per se Pus eperiatur; nam ferè sine Cicatrice potest is Locus esse, quæ expertus Ferrum non est.* The other says, "That
" as a Wound by a Knife leaves a less disagreeable Scar than that
" following the *Bursting* of the Skin, one being a simple *Division*, the
" other a *Loss of Substance*, it is always best to anticipate the *Bursting* by making an Opening as soon as the Integuments are in a
" State to threaten it."

Extending

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Extending to a general Acceptation this Remark, which is abstracted, and applying (as perhaps we rationally may) this Truth on the *Fistula lachrymalis*, to the Treatment of every Collection of Matter, the first Opinion must fall to the Ground: The first Passage is taken from Celsus, the second we receive from Mr. Pott: Great as the first Opinion is, a Decree of it may be repealed by Authority of the second;

As, ————— *Si Voce Metelli*
Serventur Leges, malint à Cæsare tolli.



Artificial

Artificial Aperision.

THE potential Cautery and Incision are the Modes by which an Opening is made by Art, except in some particular Cases; as in the Venereal Bubo, or whenever a Gland is to be destroyed, the Use of the Cautery is seldom preferred: When the Tumor is seated in a Part on which a Scar would be a Deformity, it is generally proscribed, and the Opening is directed to be made by Incision, and *that* as small as the Circumstances of the Case will admit. That this Opening may be made with the least possible Pain to the Patient, it has been recommended * to mix such Substances as can, by their Application, extenuate the Integuments, and, in Degree at least, produce a Deprivation of their Sense. If these Intentions are really in the Reach of any Composition, I know not one of more Promise than Opium and Sope, which for the Purpose may be made into a Paste.

By the Addition of Opium† to the Caustic, and by the Exhibition of a Pill containing half, or a whole Grain of the *Extractum Thebaicum* before the Application, the Pain of it may be much abated, if not entirely removed. In this Manner I have opened several Venereal Bubos, some with little Pain; some almost without Solici-

* By Boerhaave.

† The Idea of mixing Opium with the Caustic originates with Mr. Ellis.

tude. During the Application of the Caustic, the Pulse in the most irritable Habit was not much raised; and in Habits of common Irritability, the Pulse examined by the Stop-Watch, betrayed scarce any Acceleration.

To take a Leap from a very formidable Degree of absolute Pain, to a Privation of it, is, perhaps, to accomplish the Laws of Surgical Possibility, which, in their Nature nor require, nor admit of more than the first Degree of Happiness, *the Exemption from painful Sensations*. As far as the *Via surgica* lies in the Venereal Route, it would not, if it could be done, be morally prudent to make it "a Way of Pleasantness;" nor farther is it Medically* dutiful than to approximate it to the "Path of Peace."

* Asclepiades dicit, *Officium Medici esse ut jucundè curet.*

CELsus.

It has been my ill Fortune to have quoted one or two good old Authors, where their Observations appear to have been wrong: I have not, without Violence, prevailed on myself to say so; apprehensive, that the Errors of great Authority and predominant Excellence, might not only escape Censure, but receive Adoption.

The Passages I have ventured to think erroneous were not wantonly ranfacked in Pretension to Acuteness; they naturally arose from the Subject in Question. In this most diffident Opposition of Opinion I tremble at my own Inferiority, but I strive not by adventitious Posture to conceal it; nor do I wish to lower their Height by making them stoop, nor to raise my own by standing on Tip-toe. Let me do Justice to my Sentiments, and confess, that they never regard these Fathers of the Science, but with that grateful Reverence due to great Parts, and the useful Application of them; and, called off, as I may have been, by a Lapse of their Judgment, or an Escape of their Attention, I have still had internal Reference to their noble Effusions of Learning, Skill, and Ingenuity. The *Mind* cannot lose Sight of the *Lumen* of a Planet, though the *Eye* may be diverted by the *Irregularities* of its Motion.

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A Quere on the Gonorrhoea.

THE Venereal Disease and Empiricism seem to touch at all Points, and to feel an entire Cohesion; under Influence magnetically certain this Disorder is the *North* to which Quackery invariably *points*.

Perhaps the only possible Apology for the many miserable Repetitions on the Complaint, may be derivable from their producing an Acquaintance with its Consequences; and *nosse omnia hæc Salus est Adolescentulis*! However the subject is, even in this Regard so trite, and to a Symptom so nearly exhausted, that any farther Disquisition of it, would be the Analysis of a *Caput mortuum*. The Judgment and Sagacity on the Subject will be their own Historians; the *Farrago* of Quackery and Dulness may be left to its own Mortality. The Reader will be detained but a little.

There have been two Opinions on the *Nature* of the Gonorrhoea; the one is, that the Venereal *Virus* causes an Excoriation, which (sooner or later, according to the Degree of Malignance in the Disease) degenerates into an *Ulcer*, discharging true *Pus*, or a Matter more or less partaking of its Properties.

The other Belief is, that the Membrane of the Urethra suffers neither *Ulcer* nor Excoriation; that the Discharge is *not* purulent, but
merely

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merely the *Mucus* from the *Lacunæ*, by Inflammation and Irritation encreased in Quantity, and altered in Colour.

That the latter Idea is exclusively true, a Recollection of similar Discharges, as in the *Tenesmus*, the common Cold, the pulmonary *Pthifis*, give the strongest analogical Evidence; these Discharges are as apparently *purulent* as the Gonorrhea, yet are merely *mucal*; and a positive Proof, that the Discharge in that Complaint is *mucal* also, is deducible from the Examination of the Urethra after Death. In a Disease seldom connected with Death, and never the Cause of it, Opportunities of this Examination are very infrequent; however, it lately happened to me, and I received all the Conviction such Examination could afford me: Attending a Man in a very virulent Gonorrhea, while the Running was profuse, and before the inflammatory Symptoms were removed, the Patient was attacked with a very ardent Fever; the Progress was irresistibly rapid, and the Man died before the End of the fourth Day. After Death, on opening the Urethra, its Membrane was entirely free from Ulcer and Excoriation; but the *Lacunæ*, and particularly the Margin of the largest, appeared much inflamed and uniformly enlarged; on Pressure, much discoloured *Mucus* was obtained from the Cavities of the *Lacunæ*.

As far as this single Instance may be allowed to operate, the Discharge is demonstrably derivable from Irritation: In this Idea, must not the vitriolic, the aluminous, and all restringent Injections be very erroneous? May they not be subversive of the Intentions they are imagined to promote; and, in Fact, encrease the Irritation? Must not the *relaxing* Plan be more apposite? May not the topical warm Bath, its anodyne Quality being artificially encreased with strong
opiate

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opiate Impregnation, be very serviceable? Nay, if the Propriety of any Injection is admitted, may not *Opium*, with proper Combinations in this Form, be exhibited with rational Expectations of Advantage?

It had been extremely easy to have added to the Bulk of this Query, and to have inflated it to the Volume of a Treatise; to have re-collected the History of the Disease; to have grubbed up obsolete Opinions; to have raked together the several Treatments of the several Symptoms; to have pitied the Ignorance of one; to have ridiculed the Absurdity of another, and reprobated the Deficiencies of them all: To have displayed an ostentatious Insinuation of a new Mode of Treatment, and Self-congratulations on the Honour of discovering it, would have run through fifty or sixty Pages; and would have been a most comprehensive Display of the common Art of writing on the Venereal Disease; but, — *μεγα βιβλιον, μεγα κακον!* Ipecacuanha has kept its Credit since the Time of Louis Quatorze: 'Till it shall fail, the Catalogue of Emetics will not need Addition.

A Query on Subjects relating to Osseous Matter.

THE Dentists of Europe imagine the Health of the internal Part of the Teeth to be dependent on the Integrity of their Covering; that so far there is a reciprocal Dependence between the Enamel and the Substance of the Teeth, and that a Removal of the first, connects with it a Decay in the second.

The Teeth in this Instance do but resemble the other Bones, which become morbid, and exfoliate on Exposure to the external Air; the Enamel being analogous in its Office and Relation to its subjacent Bone, to the *Periosteum*, however it may differ in non-vascularity, and consequent Disregard of atmospherical Pressure.

The Customs of Batavia* may be produced, where, among other Treatments, equally repugnant to our Ideas of the Teeth, they make a horizontal Groove in them, in Depth extending far beyond the Enamel. The Exposure of the Teeth from such Removal of the Enamel is free from morbid Consequences, and though the Custom is, in general, endemial Adoption, sound Teeth are equally endemial, and it is extraordinary to see any either imperfect or decayed.

* Dr. Hawkesworth's Voyages.

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As it is possible, that from a different Modification of the same Motive the Batavian Custom may be deemed importable to England; and it may be desirable to remove any natural Prominencies from the Extremities of the Teeth, though not agreeable to make artificial Depressions in the Middle of them; and as delusive Deductions may be drawn from the undoubted Impunity of the Practice in *that* Country to weaken the Idea of Consequences we with Reason apprehend from it in *this*; and from a false Estimate of the Facility to naturalise the Custom, we may be tempted to introduce it, it may be observed, that opposite as the Facts are, they may and do exist, mutually *uninvalidated* by mutual Admission; the Principles of both are compatible; both reconcileable on the Principle of Locality, on the Consideration of Climate.

Batavia is in Latitude 6 Degrees, South; England in 51, North: Admitting the undisputed Affinity between atmospherical Levity and Heat, the Difference in the Air's Pressure at the two Places is as wide as their Distance; as numerically unequal as are the Numbers that ascertain their Latitude. And since atmospherical Pressure very much, if not alone, determines the Exfoliation of a naked Bone, it is directly seen, why the Expediency of this Custom is the Attribute of its Meridian; why its Innocency is incommunicable to its Adoption in another Climate; why the Vessels may counterbalance the Pressure of a Southern, but be inadequate to that of a Northern Sky.

Nor can we doubt the Ability of atmospherical Effect on organic Existence in *different* Climates, when we see it, at different Seasons,
in

in the *same*. If, during the Winter, we examine the Heart and Lungs of Frogs, we find their Action languid *almost* to Extinction. Bats, and other Animals of cold Blood, at the same Season exhibit the same Phenomenon; living torpid and destitute of ostensible Animality. When Crayfish and Lobsters have been deprived of their Legs, much Difference has in Summer or Winter been observed in their Reproduction; and in the human Frame the Granulation of Flesh in Wounds, the Formation of Callus, the Tendencies to Exfoliation and to avoid it, sensibly varying in different Seasons, all display the Influence of Atmosphere in the periodical Varieties each Change of Season produces; in the Quantities of organised Juices, and in the Vigour of their circulatory Motions.

It is certain, that the Air communicates its own Degree of Heat or Cold to the Bodies it surrounds and penetrates; that there is the greatest Affinity between atmospherical Levity and Heat, and that the Air ponderates with every Augmentation of Cold; that cold Air applied to our Economy, contracts the Volume of the Juices, and will dispose them to Stagnation; that Heat will rarify* the Fluids, and accelerate their Motion. Hence, in those Constitutions and those

* That Fluids dilate with Heat is commensurable by Spirituous Liquors, nay, by a grosser Fluid, by Mercury; on which Principle the Thermometer is constructed.

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Parts of the animal Frame in which the Juices are poor, the Vessels small, and the Circulation inert, Heat is serviceable and Cold pernicious; hence, a denuded Bone exhibits different Dispositions to a Recovery in different Periods of Life, and at different Seasons in the same Period; hence, in Winter and Old Age the Cure is generally protracted by unavoidable Exfoliation; hence, in Youth and Summer the Cure is frequently obtainable without it; hence, the Truth of the *Coan** Doctrine; hence, Exfoliation is not the *necessary Consequence* of the Bone being bare: The Solidity of its Surface, the Size of the Vessels, and the Impulse of the Blood through them, must principally determine it; and hence, may not the occasional Application of Cupping-glasses to a denuded Bone be rational, be serviceable? Will it not encrease the Impulse of the Blood? Will it not dilate the Size of the Vessels? Will it not counterbalance, will it not intercept the Pressure of the external Air? Will it not promote the Generation of the granulating Flesh? Will it not prevent the smallest Exfoliation?

* Τα θερμὰ πλείονα διαφέρει ὅταν καὶ ἀγυμνὰ τυλεῖται δι' ἡλίου; τυλεῖται τὸ μετὰ θερμὸν φέρον καὶ κρύον --- τὸ δὲ ψυχρὸν Πόλεμον.

HIPPOCRATES.



On

On the Practice of Issues.

IN ill-conditioned Constitutions, in every Foulness of the Habit, in the Variety of Complaints consequential to putrid Acrimony and morbid Plenitude, the Issue, in one Stage or other of the Disease, is generally recurred to. As the Propriety of this Recurrence commonly justifies itself in the Event, by a Quantity of Effect extensively beneficial, the Administration of this Effect, and the Circumstances of its Source cannot be with too much Guard attempted to be explained.

By an untenable Assignment of first Principles, the Security of their Deductions may be put in Hazard; and the Mind, unconvinced by the Explication of the *Cause*, will be too apt to doubt the Credibility of the *Consequence*. Under the Influence of this Position, and recollecting the Advantages the healing Art obtains from the Operation before us, it will be the Indulgence of rational Curiosity, if not the Prosecution of profitable Speculation, to trace those Advantages *ab Origine*, and consider from *whence* they may be derived.

The Cautery of past Times agreed with the Issue of the present; with us, indeed, the Operation is performed with the Knife, or with the potential Cautery; while, with them, the actual Cautery was very often the Agent. The ancient Practice might also *differ* from the modern, in the more frequent Repetition of the Operation on the
same

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same Subject, and at the same Time; and I believe the later Times cannot furnish a Counterpart to *Oetius*, who directed *fourteen* Issues in the Case of an inveterate Asthma. However, in the Views of the Remedy, in the *Point* from which they were taken, and the Organs on which they were impressed, there appears to be a very near Agreement. Then, as *now*, prevailed an experimental Acquaintance with the Latitude of its Ability; *then*, as *now*, was made the same suppositious Assurance of the Origination of its Cause; *then*, as *now*, artificial Ulcers were seen to correct the foul, and exonerate the full Habit; *then*, as *now*, these Effects were imputed to the Discharge; *then*, as *now*, every Observer would say with Hippocrates and Celsus, that "the Ulcers should not be healed, but suffered to run, till the Humour was spent, and the Disease removed." Better Understandings may draw more from this Position than mine can; I must confess, it does not flash Conviction upon me; and I think Questions like the following might be asked:

Is not the Cellular Membrane the Seat of an Issue?

Is not this Membrane furnished with Nerves, the symphatic and vascular system, as are other Parts of the Body?

This Membrane is pervious and communicative throughout: But wishing to rest any Imputability of Advantage on that Circumstance, can we suppose it the *Reservoir* of any Disease, containing in its Cell the Deposition of the Habit, as it does the Axunge of a Sound, or the *Ichor* of an *anasarcous* Habit? Then how can an Aperture in it *discharge* any Disease? Must we (again resisting the Rules of Rationality) suppose an elective Power in the Vessels of Secretion; an Ability to analyse

analyse the circulating Humours; to discriminate the *noxia* and *innoxia*, and separating the component Parts, to transmit the *good*, and intercept the *bad*? Is there in the Vessels such an Aptitude? If there was, would it not operate *à priori* in the first Instance, and prevent the *Introduction* of any noxious Substances into the Habit? Do we not perceive the *contrary* of this in the Communication of Disease, and in the Administration of Remedies? Would Nature admit Disease and Death with Particles of Lead, or could she admit Life and Health with Mercury and Iron? Are not these Gradations the Steps of Nature; a Solution of Continuity, Inflammation, and *Pus*? Is not an Issue a Solution of Continuity, with an Inflammation perpetuated by the Insertion of the Pea; and what can be discharged but *true Pus* generated in the Part only? For if the Discharge proceeded from the Habit, would it not issue *quâ data Porta*? And the Ulcer preserve its *Aperion spontaneously*, without the constant Provocation of a foreign Body?

On a Review of these Questions they appear importunate; if they are *reasonable* their Solicitations must be complied with, and it must be concluded, that the Discharge from the Issue is definitely *local* and specifically *purulent*; incapable to be the *Cause* of that imputable Good, which from Issues is often derived to the Habit. With what Source that Relief originates; by what *Modus agendi* it is elaborated, and by what Modification it is administered to the animal Frame, I cannot determine: May it be, that the Exertion provoked by the Inflammation for its Support, and demanded to supply a Continuity of *Pus*, in the Expenditure on a *Part* of the Body more of the *Vis Vitæ* than falls to its Proportion, may induce a *general Languor*, in Contrast to this *local Vigour*? May it be, that the absorbing System admitting

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the external Air with more Freedom, and in Quantities larger than usual, may communicate some *Stimulus* or other Property, to the Circulation? Does Analogy confirm this Proposition? And is it true, that Vesicatories (which, by the bye, are often successful Substitutes of Issues) Is it true, I ask, that Vesicatories operate not so much from their Discharge, as from the Conveyance into the Habit of some Portion of their Stimulus*; their Mode of Action on the Cuticle being, but the *Index* of their Effect, not the Effect itself? But I know not, I pretend not to decide; every Idea comes in a questionable Shape, not as Rules of Conduct, but merely as *Hints* to the Judgment. Nor, *humble* as they are, may they be incapable of that; a silly Diversion once pointed to a serious Discovery: The great Doctrine of Sir Isaac Newton, that the Colours of a Body depended on the Density of its Surface, was raised on the Bubbles of Sope and Water blown by a Child.

Bodies with large or long continued Surfaces of *Pus* often die *hectic*, after Operations, or in contused Wounds, from Delay of the Operation, or in a chronic Ulcer. If in some Respects the Issue agrees

* That the Cantharides are received by the Absorbents, and transmitted through the Routine of the Circulation, is decided by the Strangury, which is the common, the almost constant Accompaniment of a long continued Blister. Except on the Principle before supposed, the *Introduction* of something to the Circulation, how are we to account for the Fontanelle being immediate in its Effects? And why shall an Ophthalmy, which has resisted every other Mode of Treatment, have yielded to this Operation in thirty or forty Hours?

with

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with the Ulcer, it may be also subject to the same Vicissitudes; and like it, may not its Discharge, departing from the Properties of bland and mild, degenerate into the acrimonious and the putrid? May it not, in this Condition, be received by the Lymphatics; and, reversing the Consequences it was wished to produce, may it not load the Habit it was intended to relieve, and deteriorate that it was proposed to amend? Should, therefore, the lymphatic Vessels in the Track of an Issue be enlarged, it should be regarded as the Introduction of the Discharge of *Pus* into the Habit; and with the same Alacrity as the System would try to extricate itself from the Rudiment of an Hectic, *premittendis premissis*, I believe that Issue should be closed.



F I N I S.